



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,134	08/29/2005	Steven Jones	85084-402	3937
7590		08/22/2007		
Ade & Company 1700-360 Main Street Winnipeg Manitoba, R3C 3Z3 CANADA				
			EXAMINER	
			HURT, SHARON L	
			ART UNIT	PAPER NUMBER
			1648	
			MAIL DATE	DELIVERY MODE
			08/22/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/522,134

Applicant(s)

JONES ET AL.

Examiner

Sharon Hurt

Art Unit

1648

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5, 13-15, 17, 19-23, 25 and 27-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 13-15, 17, 19-23, 25 and 27-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date. _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 7, 2007 has been entered.

Response to Amendment

The amendment to the claims, filed on August 7, 2007, has been entered. Claims 1, 13 and 21 are currently amended.

Status of the Claims

Claims 1-3, 5, 13-15, 17, 19-23, 25 and 27-31 are pending and under examination.
Claims 4, 6-12, 16, 18, 24 and 26 have been canceled.

Response to Arguments

The rejection of claims 1, 5, 13, 17, 19-21, 25 and 27-28 under 35 U.S.C. 102(a) as being anticipated by Kahn et al. is withdrawn pursuant Applicant's amendments.

The rejection of claims 1-3, 5, 13-15, 17, 19-23 and 25-28 rejected under 35 U.S.C. 103(a) as being unpatentable over Kahn et al. and further in view of Takada et al. is withdrawn pursuant Applicant's amendments.

New Rejections

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5 and 30-31 are rejected under 35 U.S.C. 102(b) as being anticipated by **Ito et al.** (Journal of Virology, October 1999, Vol. 73, No. 10, pages 8907-8912).

The claimed invention is drawn to a recombinant vesicular stomatitis virus (VSV) particle comprising a nucleic acid molecule encoding a viral hemorrhagic fever (VHF) glycoprotein (G) inserted into the viral genome wherein the foreign G has replaced the native VSV G and only the VHF G is expressed on the surface of the recombinant VSV particle, wherein said recombinant VSV particle is infectious, wherein the VHF G is an immunogenic fragment, wherein the VHF G is from Lassa virus, Marburg virus, Ebola virus, Crimean-Congo HFV, Dengue virus, Nipah virus, Hendra virus, Machupo virus, Junin virus, Guanarito virus or Sabia virus, wherein the first gene of the recombinant VSV codes for the VHF G, and further limiting wherein the VHF glycoprotein is from Lassa virus, Marburg virus or Ebola virus.

Ito et al. (hereinafter Ito) teaches a recombinant VSV expressing Ebola glycoprotein wherein the mutation reduced the infectivity of the VSVΔG by incorporation of the Ebola virus glycoprotein into recombinant VSV particles (Abstract and page 8908, 2nd column).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5, 13-15, 17, 19-23, 25 and 27-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al. as applied to claims 1-3, 5 and 30-31 above, and further in view of Kahn et al. (Journal of Virology, Nov. 2001, Vol. 75, No. 22, pages 11079-11087).

The claimed invention is drawn to the VSV particle comprising a VHF G as described above and the method of eliciting an immune response in an individual comprising administering the VSV particle comprising a VHF G as described above, wherein said recombinant VSV stimulated infection but does not cause disease or symptoms associated with VHF, wherein the particle is administered orally or intranasally.

The claimed invention is also drawn to a method of preparing a pharmaceutical composition for passive immunity comprising said recombinant VSV particle as described above comprising harvesting antibodies from an animal and mixing with a suitable excipient or carrier.

The teachings of Ito are described above. Ito does not teach a method of eliciting an immune response or preparing a pharmaceutical composition.

Kahn et al. (hereinafter Kahn) teaches a recombinant vesicular stomatitis virus (VSV) expressing foreign proteins that elicit specific protective immunity (Abstract). Kahn teaches the VSV glycoprotein (G) gene was deleted from the full-length cDNA VSV genomic plasmids containing the RSV G gene such that the RSV G genes replaced VSV G in viral genome (page 11081, second column). The RSV G (attachment) is the first and major antigenic glycoprotein

Art Unit: 1648

(page 11079, last paragraph). Kahn teaches a method of eliciting an immune response in mice by intranasal vaccination with a recombinant VSV expressing RSV G (Abstract). Kahn teaches about vaccine development and passive immunization with a recombinant VSV expressing RSV G (page 11079, last paragraph). Purified RSV was harvested from baby hamster kidney cells and the antibodies were detected by ELISA after mice were inoculated intranasally with recombinant viruses (page 11080, third paragraph and page 11083, second and third paragraph).

It would have been *prima facie* obvious to the person of ordinary skill in the art at the time the invention was made to prepare the immunogenic composition in an animal and use the composition to elicit an immune response. The person of ordinary skill in the art would have been motivated to make use a VSV Δ G to elicit an immune response because Ito teaches it is effective with Ebola (VHF), and reasonably would have expected success because of the teachings of Kahn.

Response to Arguments

Applicant's arguments with respect to Kahn et al. have been considered but are moot in view of the new ground(s) of rejection. Applicant argues that the VSV Δ G taught by Kahn is not infectious. The Ito reference teaches that some mutations of VSV lacking G also lack the ability of infectivity while other mutations of VSV have reduced infectivity (Abstract).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharon Hurt whose telephone number is 571-272-3334. The examiner can normally be reached on M-F 8:00 - 4:30 PM.

Art Unit: 1648

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bruce Campell can be reached on 571-272-0974. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Sharon Hurt

August 17, 2007



MARY E. MOSHER, PH.D.
PRIMARY EXAMINER